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## **Knowledge-Based Medical Domain Specialist Prediction System**

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## Abstract

It is progressively prevalent for patients to use internet tools such as auto-assembled symptom checkers before attempting skilled medical treatment. Many such schemes try to provide a differential classification depending on the user's elucidated characteristics, which can contribute to fear if life or limb-threatening circumstances are component of the list, a phenomenon called 'cyberchondria.'. Therefore, people tend to use online sources to get a basic idea about their conditions. Those systems commonly called as Symptom checkers. Though they initially built to use as informative systems for users, the rapid development of AI and machine learning techniques opens the door for those tools to support up to clinical decision-making progress. Equally popular are systems that provide advice on where to seek help, rather than a diagnosis, and provide the most useful information in our view. Though this term is very popular, there are some limitations in their systems. As proved by many surveys none of the systems are unable to defeat diagnose accuracy of a human doctor. Therefore, still these systems are not good for clinical decision making.

In order to overcome those issues and address the most important part of a diagnose is to get the right consultant, is filling using this proposed system. As a knowledge modeling techniques ontology holds a very special place since it only carried pure knowledge which are stored by experts.

Medical ontologies are useful and efficient techniques for depicting medical expertise. They are much greater in this path than biomedical vocabulary. Each illness has several signs connected with it in the medical evaluation phase. There are presently no ontologies related to illnesses and symptoms and only tries at their infancy along with some easy suggested designs. However, well-established ontologies for illnesses and symptoms have already been created in isolation.

In this thesis, we are suggesting a new scheme to combine disease ontology (DOID) with syndrome ontology (SYMP) establishing a key disease ontology syndrome (DSO) that can scale up to any amount of illnesses and disorders the key DSO connections a few illnesses to their characteristics.

**Keywords:** Ontologies, Knowledge Modelling, Decision Support System, Clinical Diagnose